

### ABSTRACT

A resonant tunneling diode or diode array oscillator (10) including a resonant diode (11) is coupled to a millimeter-wave source (14) and a quench generator (16) for periodically quenching the oscillations so that the average oscillation time of the oscillator is proportional to signal strength of the source (14). The signal source can be from an antenna such as a dipole or tapered slot line antenna.

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